

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of the claims in the application. Please amend the claims as follows:

1. (currently amended) A method for recycling expanded polystyrene comprising steps of:
reducing a volume of the expanded polystyrene by compression by an extruder to partially melt the expanded polystyrene without external heating;
dissolving the volume-reduced expanded polystyrene in a solvent; ~~and~~
evaporating the solvent to separate the solvent from the polystyrene by heating the dissolved polystyrene solution to a temperature of 200 °C or less so as to provide a polystyrene resin; and
extruding the polystyrene resin to produce an extruded product.
2. (currently amended) The method according to Claim 1, further comprising a step of producing recycled expanded polystyrene from the extruded product.
3. (canceled)
4. (original) The method according to claim 1, wherein the solvent used in the dissolving step has a boiling point not greater than 150 °C.
5. (original) The method according to claims 1, wherein the solvent used in the dissolving step is methylene chloride.
6. (original) The method according to Claim 5, wherein the solvent further comprises unsaturated hydrocarbon having 5 to 7 carbon atoms and/or epoxide.

7. (currently amended) The method according to any one of Claim 1, further comprising a ~~first transportation~~ step for transporting the volume-reduced expanded polystyrene ~~after the volume reducing step~~ to carry out the dissolving step at a location different from the volume reducing step.

8. (currently amended) The method according to ~~any one of Claim 7~~ 2, further comprising a ~~second transportation~~ step for transporting the extruded product after the evaporating and the extruding step at another place to carry out the step of producing recycled expanded polystyrene product at a location different from where the evaporating and the extruding step.

9. (currently amended) The method according to Claim ~~8~~ 2, further comprising, ~~after the second transportation step~~, a step of impregnating the extrusion product with an expanding agent and a ~~third transportation~~ step for transporting the product after the evaporating and the extruding step to carry out the step of producing recycled expanded polystyrene product at a location different from the impregnating step.

10–14 (canceled)

15. (original) The method according to claim 7, wherein the solvent used in the dissolving step has a boiling point not greater than 150 °C.

16. (original) The method according to claim 8, wherein the solvent used in the dissolving step has a boiling point not greater than 150 °C.

17. (new) The method according to claim 1 wherein the evaporating and extruding step comprises:

providing the polystyrene solution with a separation and recovery apparatus of a polystyrene solution comprises a cylinder in which mixing shaft is disposed, wherein the mixing

shaft comprising mixing impellers being adjacent each other in the shaft direction and being shifted in a circumferential direction;

preparing the polystyrene solution to advance in the cylinder while being heated to a temperature of 200 °C or less, so that the solvent is vaporized and separated from the polystyrene so as to provide a polystyrene resin; and

extruding the polystyrene resin to produce the extruded product.

18. (new) The method according to claim 1 wherein the evaporating and extruding step comprises:

providing the polystyrene solution with a separation and recovery apparatus of a polystyrene solution comprising a cylinder comprising a first-stage cylinder member and a second-stage cylinder member; and an mixing shaft disposed in the first-stage cylinder member, comprising mixing impellers being adjacent each other in a shaft direction and being shifted in a circumferential direction, wherein the second-stage cylinder member comprising a screw shaft is disposed at right angles with the first-stage cylinder member.;

preparing the polystyrene solution to advance in the cylinder while being heated to a temperature of 200 °C or less, so that the solvent is vaporized and separated from the polystyrene so as to provide a polystyrene resin; and

extruding the polystyrene resin to produce the extruded product.

19. (new) The method according to claim 1 wherein the evaporating and extruding step comprises:

providing the polystyrene solution with a separation and recovery apparatus of a polystyrene solution comprising a cylinder comprising a first-stage cylinder member, a second-stage cylinder member, and a third-stage cylinder member; an mixing shaft disposed in the first-stage cylinder member, comprising mixing impellers being adjacent each other in a shaft direction and being shifted in a circumferential direction, wherein the second-stage cylinder member comprising a screw shaft is disposed at right angles with the first-stage cylinder

member, and the third-stage cylinder member comprising a screw shaft is disposed at right angles with the second-stage cylinder member;

preparing the polystyrene solution to advance in the cylinder while being heated to a temperature of 200 °C or less, so that the solvent is vaporized and separated from the polystyrene so as to provide a polystyrene resin; and

extruding the polystyrene resin to produce the extruded product.